

**California Climate Change Advisory Committee
California Energy Commission
October 7, 2004 Meeting Summary**

The California Energy Commission conducted the second meeting of the California Climate Change Advisory Committee on October 7, 2004 in Palo Alto. The Committee members present at the meeting included:

- Robert Parkhurst, Hewlett-Packard Corporation and Silicon Valley Manufacturing Group (meeting host).
- Cynthia Cory, California Farm Bureau Federation.
- Jan Schori and Bud Beebe, Sacramento Municipal Utility District.
- Wendy Pulling, Pacific Gas and Electric Company.
- Denise Michelson, British Petroleum.
- Abby Young, International Council for Local Environmental Initiatives.
- Ben Knight, Honda Corporation.
- Jason Mark, Union of Concerned Scientists.
- Michael Meacham, City of Chula Vista.
- Mike Mastrandrea (representing Stephen Schneider, Stanford University)
- Howard Gollay (representing Michael Hertel, Southern California Edison Company).
- Robert York (representing Robert Heald, Center for Forestry).
- Peggy Duxbury, Calpine Corporation.
- Ralph Cavanagh, Natural Resources Defense Council.
- Josh Margolis, Canter Fitzgerald.

California Energy Commissioner James Boyd chaired the meeting, which included presentations from Susan Brown of the California Energy Commission, Dr. Michael Hanemann of U.C. Berkeley and Ned Helme of the Center for Clean Air Policy (CCAP).

Presentations

Susan Brown's presentation on "California Greenhouse Gas Emission Trends and Selected Policy Options" summarized California's greenhouse gas emissions inventory, noting that transportation emissions represent approximately 50 percent of the state's human-caused greenhouse gases. Population and economic growth trends will stimulate growth in greenhouse gas emissions through 2020 and beyond.

Ms. Brown noted that California produces 1.4 % of global greenhouse gases and 6.2 % of U.S. emissions. An itemization of greenhouse gas emissions by end use sector reflects the large impact of motor vehicle use. In addition, she outlined existing California laws, policies and programs that address climate change and highlighted interactions with other government agencies, including the three West Coast states. Finally, she presented criteria the state might use to evaluate new actions to reduce greenhouse gas emissions, or to adapt to expected changes.

Professor Michael Hanemann's presentation on "Climate Change in California: Choosing Our Future" highlighted expected impacts of global climate change in California. His presentation summarized the impact of temperature and precipitation changes anticipated with increased emissions over the next 100 years in California. He noted that new models were used to analyze patterns and trends.

These models indicate average summer temperatures will gradually increase by 2 – 5 degrees Fahrenheit in 2030, 3 – 9 degrees Fahrenheit by 2050 and 3 -18 degrees Fahrenheit by 2090. These temperature changes are expected to cause increased heat waves, heat-related deaths and diminishing Sierra Mountain snow pack. The warmer temperatures will also affect seasonal timing of stream flow, water supply, and water use resulting in a greater potential for flooding and water shortages at different times of the year.

Increased greenhouse gas emissions can also increase precipitation variability. Dr. Hanemann noted the impact of these temperature and precipitation trends will adversely affect vegetation and, for example, decrease wine grape quality over the next century.

Ned Helme provided an overview of climate action policies undertaken by European Union countries and certain U.S. states. He highlighted New York's policy approach, greenhouse gas emission reduction scenarios and outcomes as an example of state action. Based upon previous climate change work conducted by CCAP, Mr. Helme identified several lessons learned in developing climate change strategies and policies:

- Regional cooperation is good, but individual states must take action.
- Mandatory standardized emission reporting and accounting is essential.
- Cap-and-trade policies can be more effective than new source offsets.
- Caps work well with Renewable Portfolio Standard policies and public benefit programs.
- Complementary actions are needed to slow emissions from vehicle miles traveled.
- Industry and freight mitigation options deserve attention.

All of these presentations can be viewed on the California Energy Commission's website, www.energy.ca.gov under the Climate Change webpage.

Advisory Committee Comments

During the meeting, the Advisory Committee discussed key topics and new initiatives and commented on the presentations. The Committee agreed to focus its efforts on specific topic categories to advise the state of California and recommended that the Energy Commission complete work to help the Committee make decisions in the following areas:

1. Advise California on Goals to Achieve Greenhouse Gas Emission Reductions. The Advisory Committee requested the development of scenarios quantifying greenhouse gas emission reductions from a variety of new initiatives, such as technology development programs, market mechanisms and regulatory actions.

The Committee noted that the scenario analysis should identify alternative strategies and evaluate implications of each scenario path.

In characterizing the various initiatives, the Energy Commission should show reduction increments compared to a baseline “business as usual” case. This baseline case should quantify and characterize the efforts of existing programs, regulations and incentives to reduce greenhouse gas emissions. The Committee also requested a macro-level cost/benefit analysis of strategies to quantify outcomes of greenhouse gas emission reduction scenarios.

2. Advise California on Adaptation and Emission Reduction Actions for Various Sectors of the State’s Economy. The Advisory Committee noted its interest to focus on sector-by-sector actions that provide the greatest emission reductions for the lowest cost and offer politically feasible measures. The Committee members expressed willingness to participate in subcommittees to identify market opportunities for emission reductions and new industry-specific initiatives ideas, in addition to seeking stakeholder sector input on issues and proposed actions.

The Committee identified agriculture, electric power and semi-conductor industries and requested the Energy Commission to prepare a list of sectors to begin work. The Committee also requested analysis of climate change impacts on sectors of the economy and the costs and benefits of potential adaptation measures within each sector.

3. Advise California on the Accounting of Greenhouse Gas Emissions. The Advisory Committee emphasized a need for California to establish standardized and accurate accounting systems to record and track greenhouse gas emissions. The Committee discussed data gathering at the “bottom up” level and a need to coordinate similar accounting performed at the regional and national levels.
4. Advise California on Public Education/Information Outreach. The Advisory Committee felt strongly that California should conduct an information campaign to educate businesses, government agencies and individual citizens about climate change impacts, liabilities, and successful efforts to reduce greenhouse gas emissions. The Committee proposed establishing information programs to help individuals or entities take action. The Committee also suggested that actions taken that tie behavioral changes to infrastructure changes would reinforce public education and outreach campaigns.
5. Advise California on Market Mechanisms and Partnership Opportunities to Reduce Greenhouse Gas Emissions. The Advisory Committee expressed a willingness to focus on the mechanics and structural options to capture the economic value of greenhouse gas emission reductions within a practical system. The Committee requested the Energy Commission to examine opportunities in various strategies, such as cap-and-trade systems, early action awards, allocation systems, technology development programs, benchmark and offset fees and

sector-specific transactions. The Committee expressed a desire to identify synergies or crossover policy benefits between elements or sectors and to explore partnership opportunities with various government agencies, corporations and other entities.

6. Advise California on Regional, National and International Climate Change Coordination. The Advisory Committee reiterated a desire that California influence national markets and climate policy. The Committee members recognized a need for regional coordination to address cross-border leakage issues. The Committee expressed interest in exploring ways to facilitate the European Union's recognition of California as a trading partner under the Kyoto Protocol, if the U.S. government remains opposed to Kyoto membership.

Follow Up Actions

The Advisory Committee agreed to meet again soon and recommended establishing interim work groups to conduct business through conference calls and smaller group meetings to make more progress. The Committee requested the Energy Commission's suggestions on the topic categories to proceed with work. The work groups will operate on a voluntary or "opt in" basis for any Committee member.

Commissioner Boyd noted that strategy or scenario work completed by the Tellus Institute and Energy Foundation should be available for the next meeting. He also said a portion of analysis of initiatives by Ned Helme and his Staff at CCAP to increase emission reductions should be completed in early 2005. In addition, the Energy Foundation has funded the Tellus Institute to develop California-specific scenarios of potential greenhouse gas reduction strategies which will be of interest to the Advisory Committee.